9: Collocott M-5 (no date) 1922 OU9 Tonga OU9

1. **Liha-mua:** Early nit, December-January. This is the time when the first planted yams are forming roots. At this stage of growth little protuberances or roughnesses, like nits, appear on the heads of the roots. The name is also explained in a more general way. Many fish spawn at this time, and many trees show tiny fruits. A word for little things is nitlike, *ngalihaliha*, and the month is said to be so called because many things are "nitlike" at this period.

2. **Liha-mui:** Late nit. January-February. All the yams, late as well as early, show the little nitlike protuberances.

3. **Vai-mua:** Early rain (water). February-March. The first rainy month.

4. **Vai-mui:** Late rain. March-April. The second rainy month.

5. **Fakaafu-moui:** Putting forth living shoots. April-May. This is a time of vigorous growth with healthy suckers and shoots appearing on many plants. The word *afu* applies especially to the suckers of the *hiapo* (paper mulberry), but is also used more widely. The *faji* (plantain) and *fau* (*Hibiscus tiliaceus*) should now be planted.

6. **Fakaafu-mate:** Dead, dying, suckers or shoots. May-June. Suckers are now not so vigorous, and dead tops of the yams appear.

7. **Hilinga-kelekele:** Laying earth, that is, either laying of earth or laying on earth. June-July. This is the month in which to start digging the yams. One explanation of the meaning of the name is that the harvested yams with earth adhering to them were laid on platforms constructed in suitable places, as under a tree or in a house, and that the name owes its origin to the fact that the adhering earth was laid down with the yams. Another explanation is that the yams were taken up and laid on the surface of the ground. The two interpretations are not inconsistent, for yams laid on a platform might still be said to be put on the ground. The name itself does not convey a precise meaning.

8. **Hilinga-meaa:** Laying *meaa*. July-August. This is the time to dig and store the remaining yams. These late yams are the biggest, and a portion of the garden is reserved for the special sorts of yam which grow to the largest size. The literal meaning of *meaa* in this place is doubtful. An explanation connects the word with *umea* (clay), and is to the effect that the big yams grow down into the clay which adheres to the roots when dug; but this interpretation is more than doubtful.

9. **Aoao:** August-September. The literal meaning of *Aoao* is obscure; a derivation for the name has been suggested which connects it with *hau-aoa*, used of rotting yam seed. The time for cutting yam for seed is now over, and it is said that if seed be cut in this month a considerable proportion of it will rot.

10. **Fuufuunekinanga:** Full leafiness. September-October. The yams, which have been planted about June and July, are now in full leaf.

11. **Ulu-enga:** Yellow head. October-November. This name is referred both to sea and land. Several sorts of fish are at a stage in their

9: Collocott M-5 (no date) 1922 OU9 Tonga OU9

221 805 136 831 244

growth when their heads are yellow under the scales. Ashore this is a time of scarcity, whence the proverb, *Ka ai ha ofa tatali ki Ulucnga.* If there is any kindness (gift) wait till Ulucnga, when presents of food will be most useful. When yams are dug a small piece of the root is sometimes thrown back into the hole. These pieces grow into yams, which though small are deep in the ground on account of the manner of their planting. During the time of scarcity people search for these little yams, and in bending down to throw the soil out of the deep holes they are likely to make themselves yellow-headed.

221 805 244 12. **Tanu-manga:** Throwing soil on branch, fork. November-December. A growing yam is likely to project slightly above the ground, and frequently a small yam grows down from the same stem thus making a branch or fork on the head of the root. In this month if the head of a yam appears forked (*manga*), the gardener banks it over with soil (*tanu*).

With Tanumanga the year normally ends. If, however, observation of the yam and other plants and of fishes at the next new moon fails to discover the appearances proper to the month with which the year begins, Lihamua, another month is intercalated.

221 805 415 13. **Ooa-ki-fangongo:** Using a cocoanut-shell as basket. *Ooa* is said to be a reduplicated form of *oa*, one sort of basket; *fangongo* is an empty cocoanut-sheli cut open and used as a receptacle for small things. This is a time of scarcity, and the idea is that one needs but a small receptacle in which to place his food.

NIGHTS OF THE MONTH

805 With the Tongans, as with other Polynesians, it is habitual to count by nights rather than by days. Where the English speaker says "five days after" the Tongan says "five nights after." An intelligent Tongan suggests as a reason that his people treat the hours of daylight and of the succeeding darkness as one day and that in reckoning the closing portion of the day is considered.

The division of the month was based on the phases of the moon, and the days or nights were counted within the month, several of the nights having special names. Expressed perhaps in a better way, there were special names for the moon in several of 805 her phases. The fisherman has strong reasons for close observance 226 of the moon, as some days are *aho ika*, fish days, favorable for the catching of certain sorts of fish. These fish days evidently vary with different localities and for different species of fish.

805 821 It is asserted that the appearance of the moon in a looking-

13: Beaglehole & Beaglehole E-5 (1938-1939) 1941
OU9 Tonga OU9
Vavau
Pangai

226 [789] [784] closed if large. The discovery of this "shark-house" by unauthorised persons in the village is sufficient to give bad luck to the fisherman.

[202] When the expedition returns with its catch of sharks, a conch shell-trumpet is blown while the cutter is still some distance away from Pangai. If this is the first time that [574] this cutter has been successfully used for shark-fishing, a large feast will be prepared for the fishermen. If the cutter has been used before, only a small feast is necessary. The catch is divided by the expert in charge. Of a catch of say, [644] [793] [651] fifteen sharks, one is given to the village overseer as the representative of authority, one is given to the pastor of the established church (both of these sharks are looked upon as tribute indirectly to royalty—to the representative of royalty, to the representative of the royal church), and the remainder are divided among the households of the village. A smaller catch would be divided in the same proportions.

226 789 784 276 If a house has been used as the "shark-house," the expert makes *kava* in this house. After this *kava* has been drunk by the fishermen and all the other men of the village, the *tapu* is considered lifted from the house. If some small object has been used as a "shark-house," this object is taken inside the house in which *kava* is made. In both cases the formal making of *kava* lifts the *tapu*; the house or object may thereafter be used for any ordinary purposes.

226 Throughout the fishing, the preliminaries and the conclusion, the village expert fisherman for shark-fishing is in complete charge of the proceedings. He directs the expedition in every particular. The months from September to [221] February are the official shark-fishing months.

Net-fishing methods for smaller fish are also employed. The hand-net may be used by one man or else a group of three or more men combine to use the European seine-net. The large net may be set during high water and left until low tide when the catch is taken and divided among the men, or else several men may hold the mouth of the net open while others beat the water with sticks and try to drive the fish into the net. No expert supervision is needed for this type of fishing.

For fishing which uses a long line of plaited coconut-sheets *(pola)*, more organization is necessary, and here the

13: Beaglehole & Beaglehole E-5 (1938-1939) 1941
OU9 Tonga OU9
Vavau
Pangai

services of the expert are called in. This fishing is planned for the night of the full moon. Six or seven days before this time, the men of the village are called together by the expert. Each man is asked to provide from ten to fifteen coconut-sheets. During the day of the full moon, the men drive a row of stakes across the exit to a wide shallow bay. To these stakes the *pola* are tied, two deep generally being sufficient. As the full moon comes up the tide will be high. The expert and others with boats float about inside the netted area catching the fish that jump into the boats. The remainder of the fishermen stand round outside the nets. Calico sheets are fastened to the tops of the *pola* and as the frightened fish try to leap over the obstructions, they are caught in these sheets. The people make as much noise as possible to frighten the fish. At a given signal from the expert, made when the tide is quite low, all the fishermen jump inside the closed arc and catch as many fish as they can. This type of fishing is carried out from November to March. Huge catches are often made. The occasion is looked upon as one of great fun. Young and old join in the sport, making as much noise as they can and enjoying the frantic excitement as the trapped fish struggle from grasping hands.

Large quantities of herring are sometimes caught by a similar use of coconut-leaf traps together with the addition of a fish-poisoning substance. This fish-poisoning is the crushed leaves and stalks of a shrub known as *kavahaha*. A circle of coconut *pola* is formed. At a signal from the expert fisherman in charge, the mouth of this circle is closed by men who beat the waters and drive the fish into the trap. Women round the circle throw the poisoning inside. The fish quickly become stupefied and are easily caught.

Hook and line fishing is carried on from canoes by one or more men. Trolling from a canoe is often successful in the months from September to December. Flying-fish netting is not a known method of fishing today. Some men in Pangai know the techniques for bonito-fishing and the beds off Vava'u where there is more likelihood of catching bonito from December to March. But bonito-fishing is no longer carried out. One informant mentioned Niuafo'ou as the only place today where old Tongan methods of catching bonito were still in use.

land. Tree stumps may be left in the ground or an attempt made to burn them out. Depending upon the area to be cleared and the urgency involved, this work may be done by the men of the household, by a working-partnership of several men, or else many men may be invited to participate, each clearing a small section in return for the first yam-harvest from the section cleared. Again, depending upon taste and other factors of choice, one or more of several different kinds of tubers may be planted in quantity.

Taro is easy to grow. Cuttings are planted and re-planted each time tubers are harvested. The tuber takes about a year to mature. The giant *taro (kape)* is best planted between the months of March to September. It takes about eighteen months to mature. The gardens are occasionally hoed to keep back the growth of weeds.

The sweet potato is also an easy tuber to grow. It is best planted in the months between March and October. It is planted in big hills, perhaps five hundred hills at a single planting. The tuber takes from four to five months to mature. The garden is hoed once during this time.

Plantain shoots are planted from June to January. The tree takes about one year to mature and at the end of this time about five shoots may be replanted from this one tree. A man will have between forty and one hundred plantains growing in his garden.

Breadfruit takes up to five years before it bears a good crop. Coconuts take about four years to mature. The coconut is generally self-seeding though plants may be cultivated if the land is poor in coconut-production. Papaia, a staple article of diet, is self-seeding. No attempt is made to cultivate this fruit. Pineapples may be planted at any time of the year, requiring about a year before the fruit is ready to harvest. Mango, oranges, limes, and lemons are not cultivated but grow wild. Watermelons are planted between June and March, but because of the ravages of the fruit fly, cultivation is hazardous.

It is on the yam however, that the village cultivator lavishes most care and attention. The yam is considered one of the most delicate-tasting of Tongan tubers and the best of Tongan foods. The first yams of the new season are

13: Beaglehole & Beaglehole E-5 (1938-1939) 1941
OU9 Tonga OU9
Vavau
Pangai

244 often reserved for a feast-occasion. Expressions of satis-
262 faction are heard on all sides as the guests neglect the commoner tubers and concentrate on the yams. To our taste the yam did not seem particularly delicate nor greatly
[123] different in flavour from other tubers. But it would have been impolitic to inform our hosts of our real opinion in this matter.

244 There are some twenty-one different named yams that the villager may grow. At most he will plant no more than half this number depending upon his judgment as to which
244 are hardiest and most worm-resistant. The first yam-
221 cuttings are planted in June, very early in the month or else at the time of the full moon. A second planting takes place in August and a third from September to December. July is considered a bad planting month because worms are more
244 likely to attack the shoots at this time. About one hundred yam-cuttings are planted in each large hill. After the cuttings have developed strong shoots, the hill is opened, the yams replanted, from four to five shoots in each separate hill. These small hills are again reopened and one shoot is finally planted in a separate hill. For each complete planting therefore, there are three minor plantings. Sticks are used as supports for the growing shoots. The yam-gardens are weeded and kept clear. Each hill will finally produce four or five yams. They are mature in from five to eight months' time. The June planting for example, will be ready in December if there has been adequate rain toward the end of
[433] this period. One acre of land will grow about one thousand hills of yam. From four to six hundred hills is considered an adequate planting for the average household.

241 To give some idea of the size of the Pangai garden, the following figures were obtained for a small household of four persons. This household had planted about five hundred *manioke* (manioc) plants, one hundred hills of yam, eight hundred *taro* plants, sixty giant *taro* plants, forty banana trees in full bearing, together with small amounts of corn, melons and *kava* trees. Most of this was planted in August, 1938, when the family returned from a long visit to Tongatapu. On January, 1939, it was planned to plant a further three hundred *taro*

/158 cont./

kape (less often taro or yams). With these tools they usually work standing. The former, apparently customary, squatting method of work (418)

418. See, for example, J. Wilson, A missionary voyage.../cited in English/ p. 245.

is used only by a few very old men. Plows as well as other agricultural machines and tractors are used by Tongans under the guidance of whites only on the state experimental farms on Tongatapu and on the property of Crown Prince Tungi on this island.

The following survey may give an insight into present-day agriculture and show the changes that have taken place.

'ufi - Yams (Dioscorea alata L.)

Even in ancient Tonga yams were one of the most important food plants (if not the most important crop). (419)

419. See J. Cook, Beschreibung...loc. cit. VI. pp. 163, 237, 283/284; W. Ellis, An authentic narrative...I. p. 89.

White employees in the Tongan government have so far discovered 80 varieties of yams in the Archipelago; more than 20 different names are familiar to the average Tongan. Yams are still the favorite tubers on all the islands, though their total cultivation has decreased in Tonga in comparison with the past (see above); in the Ha'apai group yams are today planted to a lesser extent, whereas their cultivation on the larger islands of the Archipelago (for example, Tongatapu) is still quite extensive and in some places probably corresponds to that of the past.

Planting time--with certain shifts as a result of the long north-south extension of the Archipelago--extends from June to the first days of August and from the third week of August up to October-November. As a rule, a yam crop is planted only on land that has rested; suitable

/159 cont./

244 dig with their hands until they feel the beginning of the tuber, then they continue digging with the huo spade and scoop the earth out with their hands. After they have felt the end of the yam root they fix it with the huo spade held against the opposite side of the dug hole and pull it out with their hands. They remove the earth from the tubers, fill up the holes and take the harvest home to their village.

[251] There they store the yams, which can weigh up to 50 pounds, but average from three to ten pounds, in the cook hut, under raised dwellings or in special storage huts. Yams can be stored for a long time, but usually the harvest is consumed in two to three months.

Kape = a plant related to taro (Alocasia macrorhiza Schott)
Kape was planted even in ancient Tonga. (421)

421. See J. Cook, Beschreibung...loc. cit. VI. p. 237.

[262] Its importance for the native has probably remained the same, if it has not increased (especially among the Ha'apai group); on the island of Nomuka, for example, it, together with manioc, is the chief food. The thick, rhizome-like lower stalk is eaten, not the tubers. The Tongans distinguish four main varieties of kape. The plant, which grows considerably larger than taro, is planted in special "kape gardens" or (more often) individually (for example, in yam or sweet-potato fields).

● [221] Planting time is from March to September, but especially during the last three months of this period. The natives plant kape on land cleared of weeds (in mixed planting together with yams or sweet potatos). With a huo spade they dig holes approximately 15 centimeters deep and in these they plant seedlings which they fetch from a harvested kape field (where the tubers are left lying in the ground), or they place a tuber in the hole. They also plant the seedlings in earth broken up by a simple digging stick (huo langa) (see above). In a yam-

244 412

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/159 cont./

244 kape "garden" they plant the yams some 3.50 meters apart and set the kape between each of these. Weeding is done every week or two, especially during the first period of growth. The plant, which grows [412] from one year to the next, the natives harvest after one and a half to three years by cutting off the leaves with the machete (or the huo spade), removing the earth around the rhizome-like stalk with the huo spade and then lifting the stalk /160/ out of the ground with their hands. The roots and tubers are left in the ground. The stalks reach [251] an average length of approximately one and one-fourth meters and can be kept for two or three months.

kumala = Sweet Potato (Ipomoea batatas Poit.)

The sweet potato (with its yellowish tubers) has been cultivated for a very long time in Tonga. (422)

422. W. Ellis, for example, as early as 1777, regarded them as one of the Tongan crops (W. Ellis, An authentic narrative...I. p. 89.)

[139] It is not clear, however, when and how the sweet potato, which was very probably indigenous to South America, came to Tonga, or to the South Seas in the first place. This cultivated plant still enjoys great popularity, but it is not planted to the same extent on all the islands (allegedly on account of different soil conditions) The Tongans distinguish between some ten varieties (on the basis of color and degree of firmness of the tubers).

[221] Planting time is from March to September, but particularly in May and June. The natives plant the sweet potato by digging up small hills with the huo spade or the huo lafa-lafa on the land that has been cleared for planting. Into the hillocks they dig a hole with their hands and set in four or five stalk cuttings (tendrils with leaves). The sweet potato is usually planted in an open field, but sometimes, for lack of space, it is planted between coconut palms

/160 cont./

244 (as are yams and manioc at times). The distance from one plant to
[804] another is about one and one-half meters (by eye measurement; arrangement in rows). During the first period of growth weeds are combated. After three or four weeks the hill around the plant is heaped up more. Finally the leaves have grown to such an extent that the sweet potatoes take over the land and maintenance is no longer necessary. The harvest takes place in six or seven months. The natives either simply pull the plants out of the ground with their hands, dig out the sweet potatoes with their hands and continue digging (with a pointed stick, the huo spade or the huo lafa-lafa) until all the tubers have been found, or else they first cut off the stalk (for example, with a huo lafa-lafa), dig out the sweet potatoes with the same tool or with their hands. The hole is refilled with earth. In Tonga, the sweet potatoes weigh an average of about three pounds
[251] (the largest, about eight pounds). They may be stored up to four months.

manioke = Manioc (Manihot dulcis Baillon [?])

244 Manioc is scarcely more than 100 years old in Tonga, and un-
137 doubtedly owes its introduction in the Archipelago to Europeans; its importance for the food of the natives is today considerable and exceeds that of other cultivated plants. The natives distinguish some eight varieties in the Archipelago, chiefly by the color of the
244 leaves and tubers. Manioc produces a relatively high yield even on soil that is less good.

[221] Planting occurs during all months of the year, nor is the harvest restricted to a specific time of the year. The natives plant manioc on a cleared plot of land by digging up small hills with the huo spade (or the huo lafa-lafa), or often with a European fork, and setting two or three stalk-seedlings (cut off from old manioc stalks with the

/160 cont./

244 machete (also with the huo spade or the huo lafa-lafa) about a foot above the ground and with this stub they pull the tubers (which are barely 50 centimeters long) out of the ground and dig farther for those they have not pulled out. The tubers must be used up soon, since [251] they keep for only two or three days.

The manioc planted in Tonga for food is not noticeably poisonous. The natives take no precautions. Only the manioc often used nowadays to [824] [287] glue bark cloth is poisonous and is carefully stored away from domestic animals.

talo = Taro (Colocasia esculenta Schott)

[262] Taro is one of the ancient cultivated plants of the Tongans (423).

423. See J. Cook, Beschreibung...loc. cit. VI. p. 237; W. Ellis, An authentic narrative... I. p. 89.

but in the past, as today, it has never had great importance in the diet of the natives; the Tonga Islands are too arid for a extensive taro cultivation. Nevertheless, the natives take the trouble to plant a certain amount of taro. They distinguish between three main varieties.

[221] Planting time is from June to September (seldom to December), but particularly during the months of August and September. The native cut down and burn the weeds on the land where they propose to grow taro.

[462] Here too the subsequent "sweeping" of the residue is often done by the women, whereas all the rest of the work is the business of men. Sometimes they also plant taro after the yam harvest in the holes of the harvested tubers or together with the yams. They dig the planting holes for taro approximately 30 centimeters deep with the huo spade and place in them pieces approximately 12, 15 centimeters long) of the rhizome-like taro stalk. The planting holes are then covered with earth in such a way that a depression of some ten centimeters remains, so that in case of rainfall the water can gather in it. A simpler, more

/160 cont./

244 convenient method is to loosen the soil with the huo lafa-lafa (or a European pitchfork), break it up and shove the plant section into it. The distance between plants is about one meter. Every two weeks or so the taro plant is weeded with the huo lafa-lafa. After about a year, often two years or even three to six years, the harvest takes place, at no particular time of year. They cut the stalk with the huo spade close to the ground, then dig out the tuber--around the stub from the outside inward--and carefully feel with their hands to salvage all the tubers. The following are other harvest methods: After cutting the stalk they split the exposed parent tuber with the huo spade by a perpendicular thrust, hoist up the two halves and then dig further with their hands to free the tubers. They also simply tear the plant with the parent [262] tuber out of the ground. During periods of food scarcity the stalk of the plant is sometimes also eaten.

245 hopa, pata, siaine = Bananas (Musa species)

[262] Bananas have been planted in Tonga since ancient times. Cook refers to them as the most important food plant, along with yams. (424)

424. See, for example, J. Cook, Beschreibung... loc. cit. VI. pp. 163, 236, 283.

Today too /162/ bananas belong to the major crop on all the islands of the Archipelago in terms of providing food for the inhabitants. Several varieties of bananas have long been planted on the Archipelago. (425)

425. Cook mentions, for Tongatapu, "fifteen varieties" of the "pisangs" (J. Cook, Beschreibung...loc. cit. VI. p. 236).

[137] It is not clear whether the siaine, which the natives throughout the Archipelago are not fond of eating, is a strain introduced under European influence.

[221] Bananas can be planted all year long. The natives like to plant them individually in yam, kape, taro or manioc "gardens"; but they also lay out special banana plantations, as in the days of Cook. With the

/163 cont./

245 This impression may be confirmed today for the entire Archipelago.
[178] Very likely the present number of coconut palms in Tonga (estimated at over three million) is far greater than it was in the past, since a new type of utilization was added to the old possibilities, namely, copra production. (428)

428. See p. 298 ff.

For this the natives use up 70 to 80 percent of all harvested coconuts.

It is precisely about the cultivation of the so useful coconut palm that the Tongan is the least concerned. He scarcely clears a larger area for systematic planting, but rather, wherever on his land coconut palms would seem desirable for him, he digs small holes (diameter approximately 30 to 40 centimeters) and places in each a completely ripe coconut (in any position). No further care seems to him necessary. Some natives simply throw the nuts they have set aside for planting on the ground and the undemanding plant seems to thrive
[221] even then. The "planting" of coconut palms is not restricted to any special time of the year. After seven to eight years the young palm yields the first nuts. Coconut palms, which grow by themselves or with mixed cultures (bananas, kape, taro, manioc), reach an age of over 100 years, though their production of nuts gradually decreases during the last decades of their lives. Since the ripe nuts are gathered only on the ground and one can then usually not determine from which palm they came, one cannot give any figures for Tonga about the annual production
[481] of he individual palm. To pick the young "drinking" nuts the natives climb up the coconut palms in the traditional manner: while grasping the trunk they "shinny" up and need no special mechanical aids. For climbing younger palms, however, the bad habit of cutting footholds into the trunk (with the machete) has occasionally been resorted to.

mei = Breadfruit Tree (Artocarpus altilis)

[262] The breadfruit tree was likewise widespread in ancient Tonga. Cook

/163 cont./

245 262 and Ellis mention it among the essential food plants of the natives. (429)

429. See J. Cook, Beschreibung...loc. cit. VI. pp. 236, 284; W. Ellis, An authentic narrative... I. p. 89.

It is to be assumed that today the importance of the breadfruit for the food of the Tongans corresponds approximately to that of Cook's time. As Cook already recognized, (430)

430. J. Cook, Beschreibung...loc. cit. VI. p. 189.

there is a particular "breadfruit period" in ever year during which this product replaces all other cultivated products in the meals of the Tongans. (431)

431. See p. 277 ff.

245 Breadfruit trees, of which there are eight varieties in Tonga today, grow mostly wild on the islands. The natives, however, who took them into their villages, in accordance with their old custom of planting "bread trees...all around their dwellings" (432)

432. J. Cook, loc. cit. VI. p. 163.

also set them out on their api kolo. They dig a large hole in the ground in proportion to the roots of the tree they are going to plant (for example, one and one-fourth meters deep and one meter in diameter) and plant a young, wild breadfruit tree, a year or more old, which they have fetched from their plantations. As in the case of banana and taro planting, they fill up the hole leaving a slight depression around the trunk for rain water to collect. Planting time is all year long. The first fruits ripen after about three years. The principal harvest time are the months of March to May, and then the breadfruits, which are usually knocked off the trees with long poles, dominate Tongan cooking.

[221] [262]

mango = Mango Tree (Mangifera indica L.)

It is not clear whether this tree has been indigenous to Tonga for

/163 cont./

245 a long time. It grows wild in the bush (plantations) and, like the [221] breadfruit tree, is also planted. Principal harvest time is November- [262] December. The fruits are much liked by the Tongans.

koane = Maize (Zea mays L.)

[137] This plant, introduced in Tonga by Europeans, seems the most suitable species of grain for this climate, but has attained little importance on the islands.

249 to = Sugarcane (Saccharum officinarum L.)

is an ancient Tongan cultivated plant (433)

433. See J. Cook, Beschreibung...loc. cit. VI. p. 284; W. Ellis, An authentic narrative... I. p. 89.

and thrives on the islands. Since the Tongans, however, do not engage in sugar production and no industry of this type was established in the Archipelago by Europeans, the planting of sugarcane has remained very limited.

244 hina = Pumpkin (Cucurbita pepo L.)

[137] was introduced by Europeans in Tonga. It is planted and also occurs [262] in the wild state, but is not much liked by the natives.

meleni = Watermelon (Citrullus vulgaris)

[137] likewise came to the Archipelago through European influence. It is usually planted, but is also sometimes found growing wild. The Tongans [262] like to eat watermelon, but they have not yet cultivated this plant extensively. /165/ On many islands the melons are also destroyed by harmful insects.

faina = Pineapple (Ananas comosus)

[137] This cultivated plant, also introduced by Europeans, has become quite popular, yet it is by no means commonly planted. On the main [432] islands the natives like to plant pineapple to sell. As a result of the negligence of the natives and the unfavorable location of the plantings (in part far from the villages), the pineapple is often

/189 cont./

262 This list shows that 228 out of 353 'Uiha meals consisted
184 exclusively of products that were available even in ancient Tonga, while 69 of the 173 Fungamisi meals were prepared on a purely "ancient Tongan basis." The influence of the seaport of Neiafu on the village of Fungamisi is recognizable; the example of the European and half-caste households there, as well as abundant supplies in the shops of that town clearly influence the standard of living of the neighboring
262 settlement. The proportion of salted meat, corned beef, white bread,
184 butter, tea, etc., is noticeable. The "European ingredients" (483)
197
(244)
(432)

483. "European ingredients" include all foods that were not available in ancient Tonga, but reached the Archipelago only as a result of European influences and are procured today by planting (for example, manioc, see pp. 231-232, 240-241) or by purchase from shopkeepers (for example, corned beef, roast beef, salted meat, sugar, flour, white bread, zwieback, tea, cocoa, coffee).

of 'Uiha and Fungamisi meals are usually no more than "supplementary." /190/ Manioc, however, appears as a basic food, and in Fungamisi there are a few families who have already gone over to regular bread
262 meals. The very large proportion of breadfruit is due to the fact
(221) that the months of April/May are the main harvest time for it.

262 Basically, the meals for Sundays, holidays and feasts are the
264 same as everyday meals; they differ only in quantity and in richer ingredients (and sometimes more complicated preparation). As examples
(527) we list 12 Sunday meals in the village of 'Uiha (April 1952) and
(574) four gala meals (faka afe) (484)

484. See p. 142-143.

on Nomuka (December 1951):

101: Clark K-4,5 (1974) 1978 OU9 Tonga OU9

262 Cultural patterns, which determine the
264 rank order of food consumption during family meals, also often limit the preschooler's diet.[1]

262 Diet is also influenced by the prestige value of foods as was discussed in relation to papaya, pork and goat. Tubers are generally ascribed a high prestige value in Tonga. This is particularly true of the yam and white potato. However, leafy
[146] vegetables which are potential sources of vitamins lack this status

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[1] Tongan government officials and members of the World Health Association publicly deny the existence of a feeding order within
[124] Tongan households. However, it was confidentially learned from field officers of W.H.O. and medical personnel in Tonga that such a situation does exist and is a significant influence upon the nutritional well-being of the preschooler. Personal observations substantiated the prevalence of a traditional feeding order, in which the meal is consumed in shifts, with adult men (joined occasionally by women) eating first, women and children eating in an order following. It was noted in many cases that preschoolers are unable to compete with older children for those food items not consumed by
[85] adult family members. Occasionally older children are given charge of feeding younger brothers or sisters, and subsequently neglect their responsibility. Thus, another significant factor which influences the nutritional well-being of the preschooler is his age
[22] and ability to fend for himself. A category of foods nearly universally neglected in nutritional survey work is that generally known as "bush food," or those wild or domesticated fruits, nuts, etc. which an individual collects and consumes away from the household. A preschooler is not physically developed enough to take advantage of this food source. A three-year-old was never observed scaling a coconut palm in search of a snack. However, a 40 foot
[226] palm proved no obstacle to a 6- or 7-year-old. Similarly, preschoolers were never observed on the reefs searching for edible raw shellfish. However, older children, as well as numerous adults, were able to take advantage of this valuable protein source. The preschooler is at a developmental stage in which he is totally dependent upon the household for food. However, within the household, he usually consumes only the leftovers and is often left out entirely. This cultural pattern is totally contradictory to the nutritional needs of the growing child.